

Comparisons of Job Characteristics

Focus Occupation: **Agricultural Engineers (17-2021)**

Associated Occupation: **Environmental Engineering Technicians (17-3025)**

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| | |
|----|--|
| << | Focus occupation element is much lower |
| < | Focus occupation element is lower |
| 0 | Focus occupation element is at a similar level |
| > | Focus occupation element is at a higher level |
| >> | Focus occupation element is at a much higher level |

Knowledge

Similarity of Focus Occupation to Associated Occupation: 78

Focus Occupation: Agricultural Engineers (17-2021)

Associated Occupation: Environmental Engineering Technicians (17-3025)

| Associated Occupation's Key Knowledge Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | | Evaluation of Focus Occupation |
|--|---------------------------------|--------------------------------|---------------------------|----|--|
| Engineering and Technology | 5.7 | 15.8 | 23.4 | >> | Current knowledge level is likely more than sufficient |
| Design | 5.2 | 11.1 | 21.5 | >> | Current knowledge level is likely more than sufficient |
| Building and Construction | 4.0 | 10.6 | 13.8 | >> | Current knowledge level is likely more than sufficient |
| Physics | 4.3 | 10.2 | 18.4 | >> | Current knowledge level is likely more than sufficient |
| Law and Government | 5.9 | 9.5 | 10.2 | 0 | Current knowledge level may be sufficient |
| Biology | 3.7 | 6.8 | 11.0 | >> | Current knowledge level is likely more than sufficient |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 85

Focus Occupation: Agricultural Engineers (17-2021)

Associated Occupation: Environmental Engineering Technicians (17-3025)

| Associated Occupation's Key Skills Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | | Evaluation of Focus Occupation |
|---|---------------------------------|--------------------------------|---------------------------|----|--|
| Reading Comprehension | 10.7 | 16.3 | 14.8 | < | A higher skill level may be required |
| Critical Thinking | 10.8 | 14.5 | 15.0 | 0 | Current skill level may be sufficient |
| Active Learning | 8.7 | 12.6 | 11.2 | < | A higher skill level may be required |
| Mathematics | 6.2 | 11.3 | 12.0 | 0 | Current skill level may be sufficient |
| Quality Control Analysis | 5.9 | 9.7 | 6.2 | << | Extensive development of skills in this area may be required |

| | | | | | |
|----------------------------------|-----|-----|-----|---|---------------------------------------|
| Management of Material Resources | 3.7 | 6.8 | 6.3 | 0 | Current skill level may be sufficient |
|----------------------------------|-----|-----|-----|---|---------------------------------------|

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

| Abilities | | Similarity of Focus Occupation to Associated Occupation: 92 | | | |
|--|---------------------------------|---|---------------------------|--------------------------------|---|
| Focus Occupation: Agricultural Engineers (17-2021) Associated Occupation: Environmental Engineering Technicians (17-3025) | | | | | |
| Associated Occupation's Key Abilities Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation | |
| Written Comprehension | 11.0 | 16.6 | 15.2 | 0 | Current ability level may be sufficient |
| Problem Sensitivity | 11.1 | 15.9 | 13.9 | < | Some improvement in abilities may be required |
| Near Vision | 11.1 | 14.7 | 12.2 | < | Some improvement in abilities may be required |
| Deductive Reasoning | 10.6 | 14.5 | 13.9 | 0 | Current ability level may be sufficient |
| Inductive Reasoning | 10.2 | 13.6 | 14.0 | 0 | Current ability level may be sufficient |
| Information Ordering | 9.9 | 13.3 | 11.9 | < | Some improvement in abilities may be required |
| Category Flexibility | 9.0 | 11.8 | 12.2 | 0 | Current ability level may be sufficient |
| Mathematical Reasoning | 6.3 | 10.6 | 11.5 | 0 | Current ability level may be sufficient |
| Number Facility | 6.3 | 10.6 | 11.0 | 0 | Current ability level may be sufficient |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

| Activities that Both Occupations Have in Common | | Similarity of Focus Occupation to Associated Occupation: 91 |
|--|-------------------------|---|
| Focus Occupation: Agricultural Engineers (17-2021) Associated Occupation: Environmental Engineering Technicians (17-3025) | | |
| Work Activities | Exclusivity of Activity | |
| Analyze scientific research data or investigative findings | 27 | |
| Analyze technical data, designs, or preliminary specifications | 47 | |
| Calculate engineering specifications | 64 | |
| Communicate technical information | 4 | |
| Create mathematical or statistical diagrams or charts | 43 | |
| Develop plans for programs or projects | 31 | |
| Estimate cost for engineering projects | 69 | |
| Evaluate engineering data | 60 | |
| Examine engineering documents for completeness or accuracy | 62 | |
| Explain complex mathematical information | 30 | |
| Follow manufacturing methods or techniques | 73 | |
| Inspect facilities or equipment for regulatory compliance | 51 | |

| | |
|---|----|
| Prepare technical reports or related documentation | 22 |
| Read blueprints | 10 |
| Read schematics | 34 |
| Read technical drawings | 7 |
| Test equipment as part of engineering projects or processes | 67 |
| Understand engineering data or reports | 48 |
| Use building or land use regulations | 65 |
| Use government regulations | 44 |
| Use hazardous disposal techniques | 80 |
| Use hazardous materials information | 35 |
| Use pollution control techniques | 62 |
| Use scientific research methodology | 21 |
| Use technical information in manufacturing or industrial activities | 67 |
| Use technical regulations for engineering problems | 61 |

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 88

Focus Occupation: Agricultural Engineers (17-2021)
Associated Occupation: Environmental Engineering Technicians (17-3025)

| Tools and Technologies | Exclusivity |
|--|-------------|
| Computer printers | 2 |
| Computers | 1 |
| Content authoring and editing software | 1 |
| Industry specific software | 1 |
| Information exchange software | 1 |
| Network applications software | 1 |

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.